423 one party fails to make the required response. It creates a wrong impression to
593 speak of land being 'vested' in a man if all he has (independently of some
[578] woman) is a cleared patch of ground on which nothing grows; nor is the woman in a better position as she cannot (independently) bring any crop to maturity as she needs the man's garden magic. As we shall see below, 'rights' in all Orokaiva land transactions are limited in some way similar to this.

3. *Land Transactions between Men and Spirits*

775 A second basic transaction mediated by the land is that between the soul of a
423 recently deceased person and a new-born infant. The Orokaiva believe in
887 transmigration of souls. But this transmigration occurs through the mediation of
241 the piece of land where the spirit of the dead person has taken up special residence. This is usually the garden he or she was cultivating at the time of death. It is a fact of Orokaiva life that old people do not stop gardening as long as they have any strength left in their bodies. Waddell's study of time allocation in Sivepe showed that after the age of fifty-five, time spent on productive subsistence activity, especially in the garden, declined only slightly, whereas non-productive activity (e.g. social obligations, dealings with external agencies) declined very sharply (1968: 104). Old people devote their reduced energies almost exclusively to their gardens, grow progressively closer to their gardens and away from the social network, until finally, after death, their spirit becomes still more closely attached to the land. Their souls re-enter association with the village through transmigration.

775 Crops from the garden cultivated by the deceased may not be eaten by any
768 member of the deceased's lineage. They are harvested by the heir and given
241 away by him to persons outside the lineage. No *bere* are taken from these crops. After a suitable period of fallow, the garden is replanted, but even then the land is not thought to be free of the deceased's spirit. Very often the son or brother of the deceased plants the garden and uses the produce to give a feast. It is thought that the spirit presents no danger to food grown in that plot afterwards.

775 Transmigration is affected by a ritual performed shortly after the birth of an
851 infant. The parents take the child to the land where the spirit of the deceased is
774 believed to reside. They seek the spirit by placing leaves of a fragrant plant called *mo* in a creek which runs through the land. When the spirit is thought to have entered the leaves, the parents address it thus: 'You are dead now. We shall look after the land and we shall look after the baby so it will become big and strong. Then this child will look after the land.' The wife, in preparation for this rite, has brought the baby to the garden in a string bag, and has also brought a stick. When she arrives in the garden, she places the stick in the ground and hangs the baby in its string bag from the stick. After the ritual by the water, she drops some of the leaves by the stick, then takes the baby, the bag and the rest of the leaves and returns home with her husband. The custom is for the husband to say at night: 'I hear the baby crying.' He is expected to go back to the garden and talk to the baby that is believed to be in the stick, telling it that the parents will now look after it and there is no need to cry. He should then take the stick, with the 'baby' inside it, to his home.

[753] The significance of this ritual became a little clearer to me through the case of

5: Schwimmer E-4,5 (1966-1967) 1973
OJ23 Orokaiva OJ23
Mountain Orokaiva

a baby, named Jarata, who became sick and died at the age of nine months (of gastro-enteritis). I was told the cause of death was the father's neglect to collect the stick. The baby Jarata who died was described as a spirit baby (*meni ahihi*); the real baby (*meni be*) had been left in the garden inside the stick and was taken away by the fairies (*sovai*). When the baby became sick, the medicine man went to collect the stick, no doubt with appropriate magic, but it was too late; the 'real baby' was no longer there.

This explanation, referring to the father's neglect, was given by members of Jarata's maternal clan. But I was given a second explanation by the child's paternal clan. According to them, the child died because the mother did not look after the land properly. The assumption here is that if the garden where the child obtains what we provisionally call his soul is well tended, then the child's body will also grow well, but if the garden is neglected (horticulturally or ritually), the child will become sick and die. This intimate connection between the garden and the well-being of the soul endures to some extent throughout life but is especially critical in infancy before a child is able to walk and grows teeth.

It is clear that the 'baby in the stick' resembles what is generally known as an 'external soul'. In its more usual form an 'external soul' resides in an object which is carefully preserved from danger, for any vicissitude that may threaten the object will also threaten the life of the person to whom the 'external soul' belongs. Normally such an object is carefully buried and kept out of harm's way. It appears that the Orokaiva do believe in external souls in this sense, and that they reside in particular specimens of a plant after which a person is named, but that is not relevant here. The concept of the baby in the stick differs in interesting ways from the usual kind of 'external soul'.

The first difference is one of terminology. When I asked whether the part of the baby that was in the stick was called its *ahihi* (spirit) this was denied explicitly. On the contrary, it was the *ahihi* of the child that the mother took with her to the village after the ritual and it was the *ahihi* that the mother was left with when the child sickened and died. The child I had been looking at for several months and that died of gastro-enteritis was nothing but an *ahihi* and it was for that reason that it wasted away and could not live. The part left in the stick and stolen by the fairies was actually the child's *hamo*, its body. Emphatically, therefore, the Orokaiva believe that *ahihi* can be corporeal and that *hamo* can be incorporeal.

Let us now consider more precisely the transaction between deceased and infant that may be called transmigration of souls, which is mediated through the land. Let us start with the death of a man of the Seho clan who was called Jarata (1). Jarata's spirit stayed on the land he had been cultivating at the time of death. Some six years later, Jarata's brother lent this land for a season to Gilford, the husband of a classificatory sister. Gilford's wife was pregnant at the time. When the infant was born, it was named by the man who had lent the land, and was given the name of the dead brother, Jarata. As far as I understand, the effect of this act of naming was to attach the *ahihi* of Jarata (1) to the infant, Jarata (2). (A male infant may obtain its name from either its mother's or its father's patrilineage.) But in addition to *ahihi*, the baby had to be given bodily strength and vigorous growth, in other words, it had to have *hamo*. This could be obtained only from the garden where Jarata (1) was still present. Jarata's *hamo*

731 In the second phase, which is well documented through the reports of Keesing and Belshaw, attitudes were more complex. Our present concern is solely with the question whether the evacuees continued to regard absence from their home villages as necessary. Later, we shall refer to the gratitude that was shown to the Europeans for helping them in their hour of need, the extraordinary degree of cooperation and orderliness that prevailed, the sense of guilt that may have motivated the people in their compliant attitudes. We shall also refer to the anxieties the people underwent at this period: the usual anxieties of camp life, the uncertainties of the whereabouts of many kinsfolk who might or might not be alive, the fear that somehow they would be unable to [823] get their land and villages back. Informants stressed to me that the worst suffering of those days was simply home sickness, the sense of desolation at being separated from the places to which they so intimately belonged. Hence, in spite of the fear for the mountain, the Orokaiva very soon began to exert pressure upon the camp authorities to let them return home.

731 This pressure is especially evident from Belshaw's data:
657 people argued that the Europeans would not necessarily know what would be a safe area should the volcano blow up again--hence the maintaining of the camps could not logically be justified by their supposed safety (Belshaw, page 244). When the authorities inquired whether the people favoured consolidation of villages, many of the answers "were framed so as to assure the authorities that all would be well if they left the refugee camps immediately; everything was subordinated to this end." (Belshaw, page 246). Every excuse was given for making trips to the home area, and the authorities seem to have tried to restrict the number of persons joining such expeditions; also, they evidently forbade women to join their husbands, all no doubt to ensure that people would really return to camp. In spite of this battle of wits, the period was one of relatively excellent Orokaiva-White relations. The point is, however, that the evacuation camps were soon regarded as increasingly unpleasant and unnecessary.

731 Attitudes also varied according to the distance between the camps and the home villages. At Cape Killerton and Oro Bay, [823] the Orokaiva were deeply disturbed at being in foreign territory, far from their homes, and close to the sea which they particularly feared. I was told this by all Sangara informants and it is also stated in Keesing's report. My informants also ascribed sickness [753] of many people, especially old people, to homesickness. This does not conform to the medical record, as presented to me verbally by Dr. Gunther who was personally in charge of medical care in the [164] camps. Dr. Gunther said there was not much sickness; there were cases of spinal meningitis and paratyphoid, which he ascribed to close living together in the camps and which were "not very much [753] more" frequent than in any camp. It is significant, however,

731 that the Orokaiva explained these cases not by sorcery (as they
● [153] regularly do) but by homesickness.

The administration, in any case, seemed to be concerned about the malaise of refugees kept in coastal camps. All Australian informants to whom I spoke agreed that it was this malaise (and pressure by the Orokaiva) which led to a shift of the Eroro Bay refugees to Popondetta at the earliest opportunity (in April). A few weeks later they were allowed to go to Irihambo, a new settlement at the boundary of Sangara territory. Thus, one of the variables of special significance in the comparative study of displaced communities--removal from the home territory--was of minor significance in the case of the Orokaiva. Almost as soon as the immediate danger of the eruption was passed, people pressed for a return to their home territory and this pressure was not
[182] resisted for long. If the eruption had a lasting effect on Orokaiva norms of behaviour and belief, this was not due to changes of location, but rather to the experience of the disaster and the unexpected scope of Australian assistance, and to new residential patterns introduced when the displaced communities were resettled.

657 The government had long followed a policy of consolidating
361 hamlets and villages, not only in Orokaiva territory but in all parts of Papua. This policy existed long before the government began to pursue actively its present objectives of social and economic development. When I asked senior officials of the administration for the reasons behind this policy, I was always told that village consolidation made patrolling and the maintenance of law and order easier and that regulations concerning hygiene, housing standards, road building were more easily enforced. It was the practice, well before the eruption, to keep lists showing the names of all inhabitants of the Orokaiva district. These lists were subdivided into village lists; a patrol officer visited (and still visits) each listed village once a year and all the persons listed as living in that village must then report themselves present. Deaths and births and marriages are recorded. It seems to have been the practice for patrol officers to instruct groups living in small hamlets to join other village units. Thus, in Sivepe many amalgamations of population groups occurred over the years and the people claimed that all these amalgamations were made in response to government instructions. Even if this is not always strictly true, there is nothing novel in the pressure put upon Orokaiva after the eruption to go and live in consolidated villages.

On the other hand, there were several factors favouring such
[731] a development. The first of these was the continued restriction placed upon residence near the mountain. Even after May, 1951, there were several thousand Orokaiva who could not return to their old village sites. The villages where they were settled were

CHAPTER V: Disease

Section 1: The Community as a Carrier of Disease

164 Data on Orokaiva health are sparse due to the absence of medical research. Some of the picture may be seen from the table of 1966 hospital admissions of St. Hargaret's Hospital, Eroro (Table 11).[A] The figures for serious illness over the whole of the Northern District, are of course far higher than these figures indicate as only a fraction of cases of illness come to the notice of the hospital. It is estimated at 90% of the population is infected with malaria while filiariasis, [146] gastro-enteritis, influenza, scabies and other skin diseases are also extremely common. Some rough studies of Orokaiva diet, carried out under the auspices of Saiho hospital, seem to indicate that malnutrition plays only a minor role as the cause of Orokaiva disease, and patients admitted to hospital rarely have diseases caused by [165] malnutrition. Malaria causes many deaths among children, including one in Sivepe during the time of my stay. People are extremely anxious [753] about disease, even mild attacks of influenza or of malarial fever. [754] the cause was always thought to be sorcery.

Section 2: The Community as the Victim of Unfamiliar Disease

164 No unusual incidence of disease was noticed in the evacuation
731 camps, except for infections due to bad water supply at Cape Killerton camp which was evacuated after a week. Dr. Gunther noted some spinal meningitis and paratyphoid as "the result of close living together in camp." Some old people died, as informants told me, due to grief and loss of the will to live after the disaster.

Section 3: Community's Perception of New Location as Healthy or Unhealthy

753 The inhabitants of Ilimo camp were not particularly concerned
731 about health dangers in their new location. Ilimo was not far away from their own territory; villages such as Sivepe had had at least some friendly contact there and their fears were concentrated more on the safety of some of their kinsmen and the threat to the land and possessions they had left behind. It was different for the Sangara and Isivita people who were encamped in the Oro Bay area, in the midst

A [See Cat. 116, p. 216--Analyst]

753 of traditional enemies, in territory which had always been regarded
731 as hostile and dangerous. Keesing furthermore reports that "these
mountain people apparently could not conquer a fear of the sea, and
[821] this was reinforced by a rumour that a supernatural "tidal wave" was
to occur along the coast. The camp director told how every night the
more timid scattered on to the higher ground rather than sleep in the
camp on the foreshore."

There is no record that any fears continued after the people were resettled on their own lands. For instance, they ate the products of their land without regard to the fact that they had been scattered by volcanic ash.

164 The abrupt change in diet which occurred in the evacuation
262 camp seems to have had no injurious effects and aroused no great
731 concern. The people liked the rice and meat rations they were given. After awhile they began to long for their own food. Their expeditions to their home villages enabled them to collect at least some taro for themselves.

128 I shall discuss the general health problems of the Orokaiva and government and mission health measure in subsequent chapters.

755 medicine, though by no means always. Bandages were especially popular;
they were worn as status symbols and as dancing ornaments. Nurses and
752 physicians are regarded with affection; any person who obviously wants
to be helpful would be treated thus, and it has of course been noticed
554 that they relieve a great deal of discomfort even though Western
theories of the causation of disease are treated sceptically and mostly
753 explained away because the nurses and physicians usually do not under-
stand the fine points of sorcery; only the Orokaiva have this knowledge.

Data on the eruption period do not suggest that the attitude
731 to medicine was different then to what it is today. There were,
743 however, fewer facilities: the hospitals were smaller, there was
less available transport to reach them with, the chain of aid posts
built by the Higaturu Council did not yet exist, so that outside the
government hospital, the only facilities were the mission stations.

744 The evacuation camps provided a good opportunity to put a
public health programme into operation, and this opportunity was taken.
No regular anti-malarial preventive treatment was given because this
clearly could not have been continued after the camps were closed--
and it was feared that anti-malarials might lower natural resistance.
On the other hand, everyone at Ilimo was given prophylactic treatment
against hookworm. Unfortunately, this medicine had the effect of
"making people feel a little drunk." One man, the sole male survivor
of a large family killed during the eruption, went berserk through the
medicine and caused a near riot. Mr. Kaad then abandoned his campaign
against hookworm at Ilimo, reviving it later, in the Saiho period.
Prophylactic treatment against hookworm has not been continued because
reinfection constantly occurs. The camps provided a practical object
lesson on the Western ideas of treating waste matters, sanitation and
water supplies, a lesson which no doubt bore fruit some years later,
when the Higaturu Council had money and an ideological base for bringing
[242] about such innovations. Finally, the introduction of sweet potatoes
[196] at Ilimo, by means of distribution of sample tubers and seeds and the
teaching of methods of cultivation, had a definite public health
objective: it was done because the yellow and red varieties of sweet
potato are particularly rich in vitamins in which Orokaiva diet is
supposed to be often deficient. Today, some of this sweet potato is
grown in Sivepe, though on a small scale, while plantings in Inonda
are somewhat more extensive. (The sweet potatoes resist drought better
than taro.)

The most active public health programmes I saw in 1966-67
were directed at: malaria control, infant health, village hygiene.
The key figure in public health improvement at Sivepe was the health
inspector employed by the Higaturu Council. This man was expected to
cover the whole of the Council area, and spent much of his time
touring villages. As his home was at Garombi and he had many relatives
in Sivepe, he made frequent visits. Sivepe caused him little trouble,
he told me, as waste matter was thrown into deep holes, everyone had
a lavatory and the place was kept clean in the prescribed way. On